Similarly, U.S. Patent No. 5,641,761 to Takahashi et al is cited against the same set of claims wherein said reference is cited as teaching glucan adjuvant administered to fish and crustaceans for immunizing against pathogens.

The Applicant respectfully submits that claim 1 as amended serves to distinguish over these two references as the glucan of the claimed mucosal adjuvant composition is not disclosed in either of the references.

The Benach et al reference merely discloses a beta-1,3 glucopyranose derivative with no disclosure or evidence of the structure of the glucopyranose.

Takahashi et al disclose and claim methods for enhancing the immune systems of fishes and crustacean by feeding or injecting glucan which consist of a beta-1,3 main chain with no disclosure of any side chain. The glucan of the claimed method contain the 1,3 main chain and are essentially devoid of any side chain as only a residue is disclosed as being attached to the main chain.

Benach et al is also cited under 35 USC § 103(a) as making obvious the claimed invention as it is asserted that it would have been obvious to modify the teaching of Benach in order to arrive at an enhanced influenza vaccine.

Applicant respectfully disagrees with the Examiner's assertion of the instantly claimed composition is a mucosal adjuvant composition while the reference sets forth against infection in domestic cattle wherein glucan disclosed as a beta-1,3 glucopyrancose derivative of yeast cell wall is included as an adjuvant.

Careful review of this reference makes it clear that the instantly claimed invention is not obviated by the Benach et al reference as the glucan disclosed therein appears to be a whole beta-

1,3 glucan derived from a yeast cell wall. All beta-glucans are beta-1,3. In the instant reference. However, there is no disclosure of the existence if side claims much less the structure described in the claim provided hereinabove.

Furthermore, the instantly claimed composition is directed to a mucosal adjuvant while the reference only discloses intravenous injection. It is submitted that one of ordinary skill in the art would not be able to readily recognize and understand that an adjuvant for use in an injectable vaccine could be readily substituted for a mucosal vaccine.

In fact, the instant specification recognizes the fact that it is readily known that there are differences in the different immune systems and accordingly differences, which are eluded to at page 3, second full paragraph of the instant specification. It is known that the different immune systems of the human body function separately and simultaneously. It is clear then that while an adjuvant for an injectable vaccine may be effective when administered as such, there is no evidence to suggest that same adjuvant would be effective for mucosal administration.

The reference does not disclose the beta-1,3 glucan, which is claimed in the instant, claimed inventive composition. Even if the glucan of the reference were remotely similar or the same as the claimed glucan it is submitted that such a claimed composition would not be obvious as one of ordinary skill in the art would not could not readily conclude that because one compound utilized as an adjuvant in an injectable vaccine could easily be chosen and substituted for use as an adjuvant for mucosal administration.

In view of the aforesaid amendments and supportive argumentation it is respectfully submitted that the instantly claimed composition is both novel and inventive. Favorable, reconsideration is respectfully requested.

Respectfully submitted,

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